TRANSIT ASSET MANAGEMENT MANUAL - OVERVIEW

State of Good Repair Roundtable
Philadelphia, PA
July 17, 2012

Presentation Topics

- Manual Overview
- Transit Asset Management in Context
- Transit Asset Management Framework
- Transit Asset Management Implementation
- Q&A

Manual Overview

Manual Objectives

- Designed to increase the awareness and improve the practice of asset management in the US transit industry
- Provides a transit agency–specific application of asset management concepts, processes, and tools
- Supports an agency's drive to increase the maturity of asset management practice
- Provides tools and resources for agency managers and practitioners across the country

Manual Organization

- Introduces key asset management concepts
- Presents an asset management framework and business model that define and communicate “best practice”
- Provides guidance that can be used to prepare and implement transit asset management plans
- Includes tools and case studies that can support asset management planning and implementation

Transit Asset Management Manual Chapters

1. Preface and Guide Introduction

   Provides reader with the purpose, structure, and sources of this document. Additionally, it helps the reader navigate to the sections most useful to them.

2. Introducing Transit Asset Management

   Provides reader with a framework and a "visual" of a highly-functioning asset management transit agency. Defines transit asset management and outlines expected benefits and outcomes.

3. Asset Management Framework Business Processes

   For each process outlined in the framework, this chapter provides: how to and best practice guidance, key implementation activities and challenges, and peer examples.

4. Asset Management Information Systems

   Describes the use of asset management information systems, and summarizes the implementation principles associated with these tools.

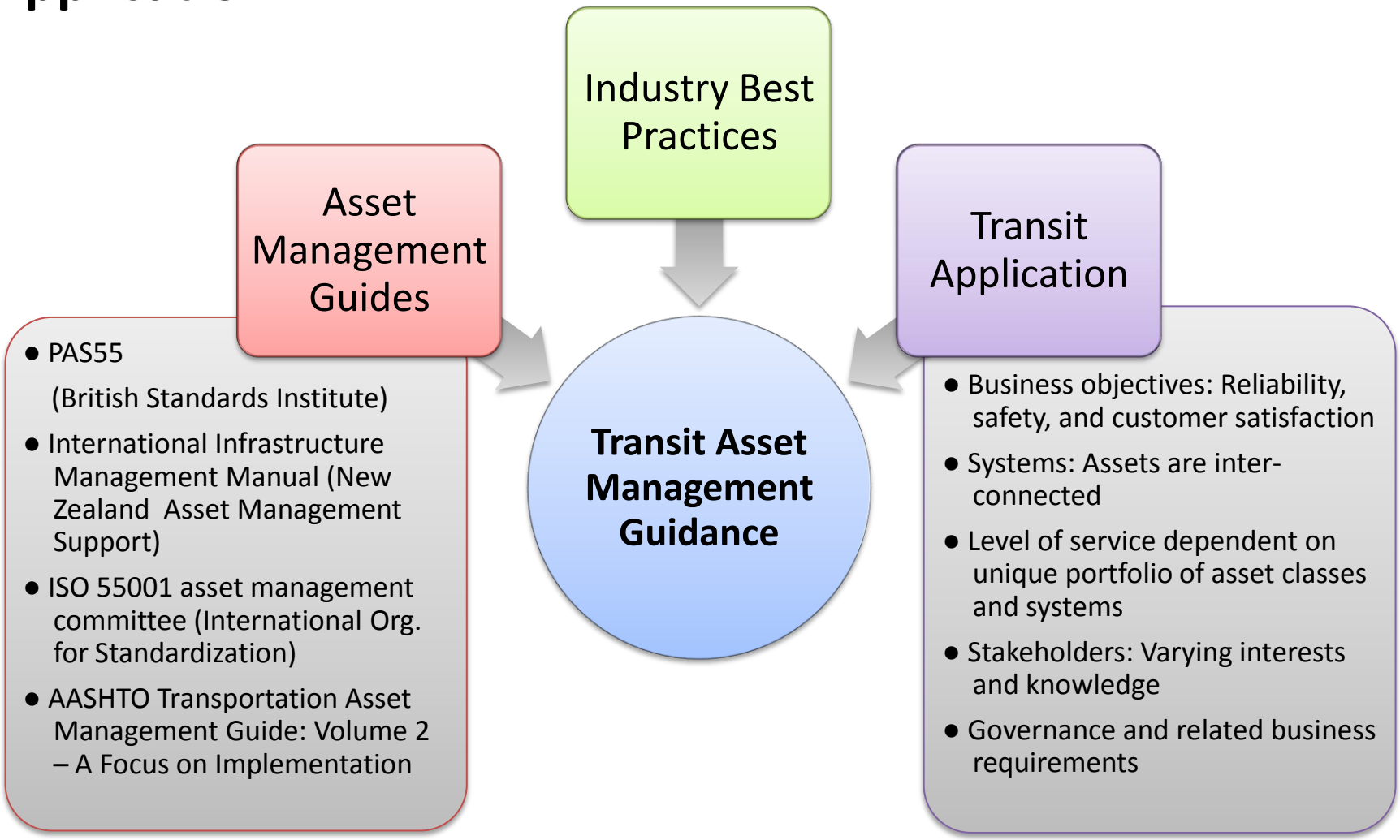
5. Asset Class-Specific Information

   For each major asset class, this chapter outlines lifecycle management considerations and "best practices."

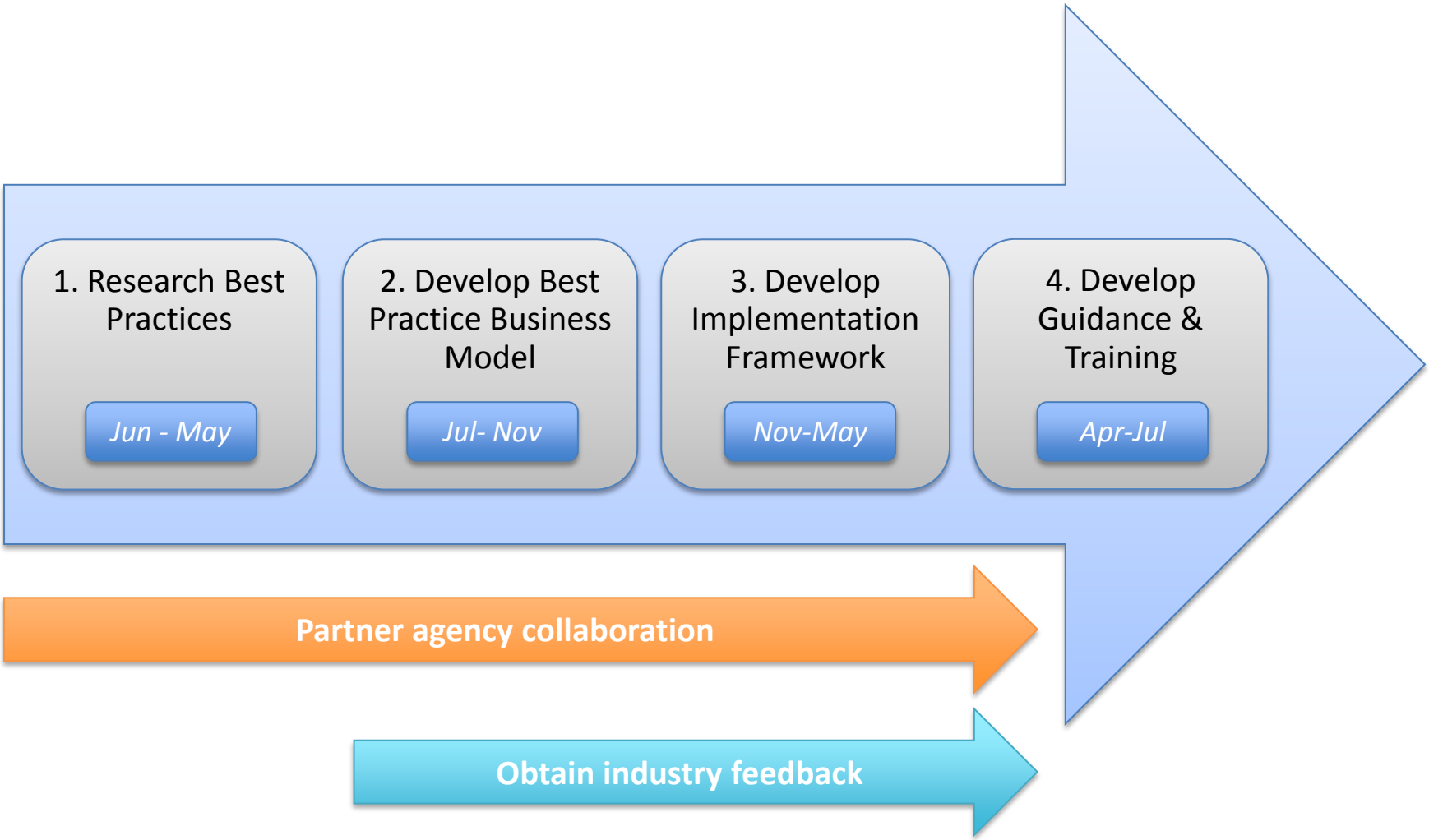
6. Implementation Guidance

   Provides guidance on planning for and implementing change that improves an agency's asset management practices. It introduces key implementation concepts, provides an agency self-assessment for determining the agency's maturity baseline, and outlines potential implementation paths for incorporating into the agency's business plan.

Transit-Specific Asset Management Planning Application



Project Approach

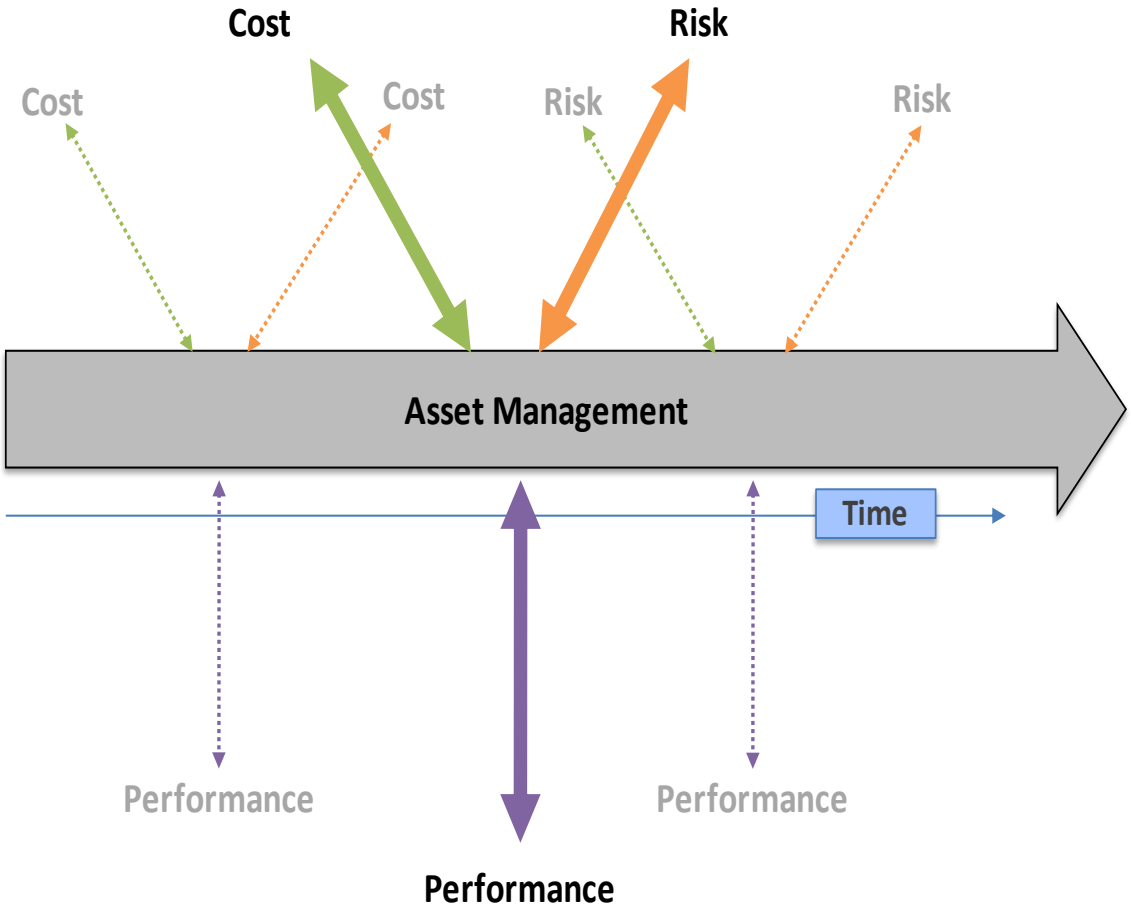


Transit Asset Management in Context

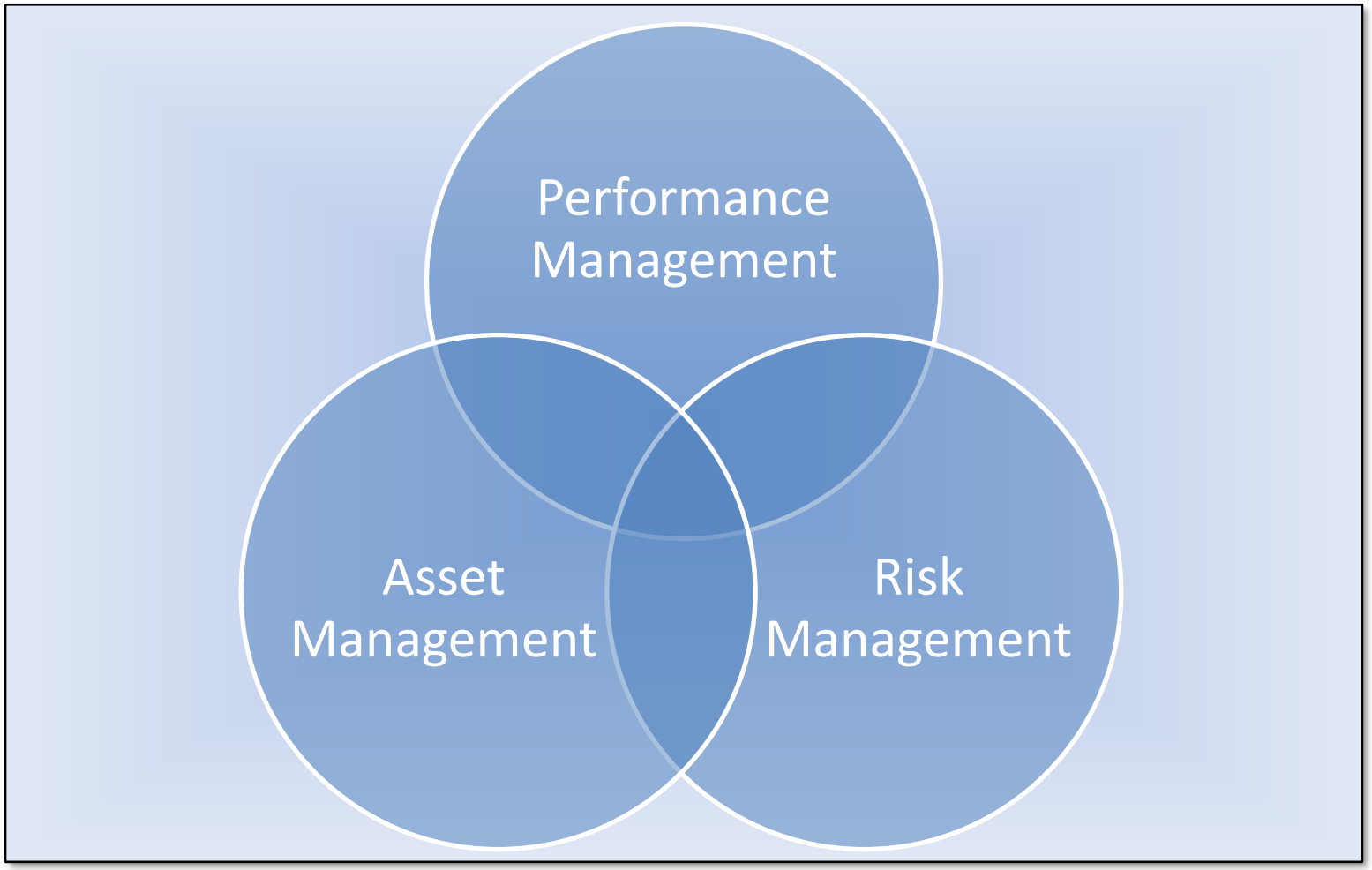
Transit Asset Management Defined

Transit asset management is a strategic and systematic process through which an organization procures, operates, maintains, rehabilitates, and replaces transit assets to manage their performance, risks, and costs over their lifecycle to provide cost-effective, reliable, and safe service to current and future customers.

Transit Asset Management – Managing Cost, Risk, and Performance across the Lifecycle



Key Component of Agency Strategic Management

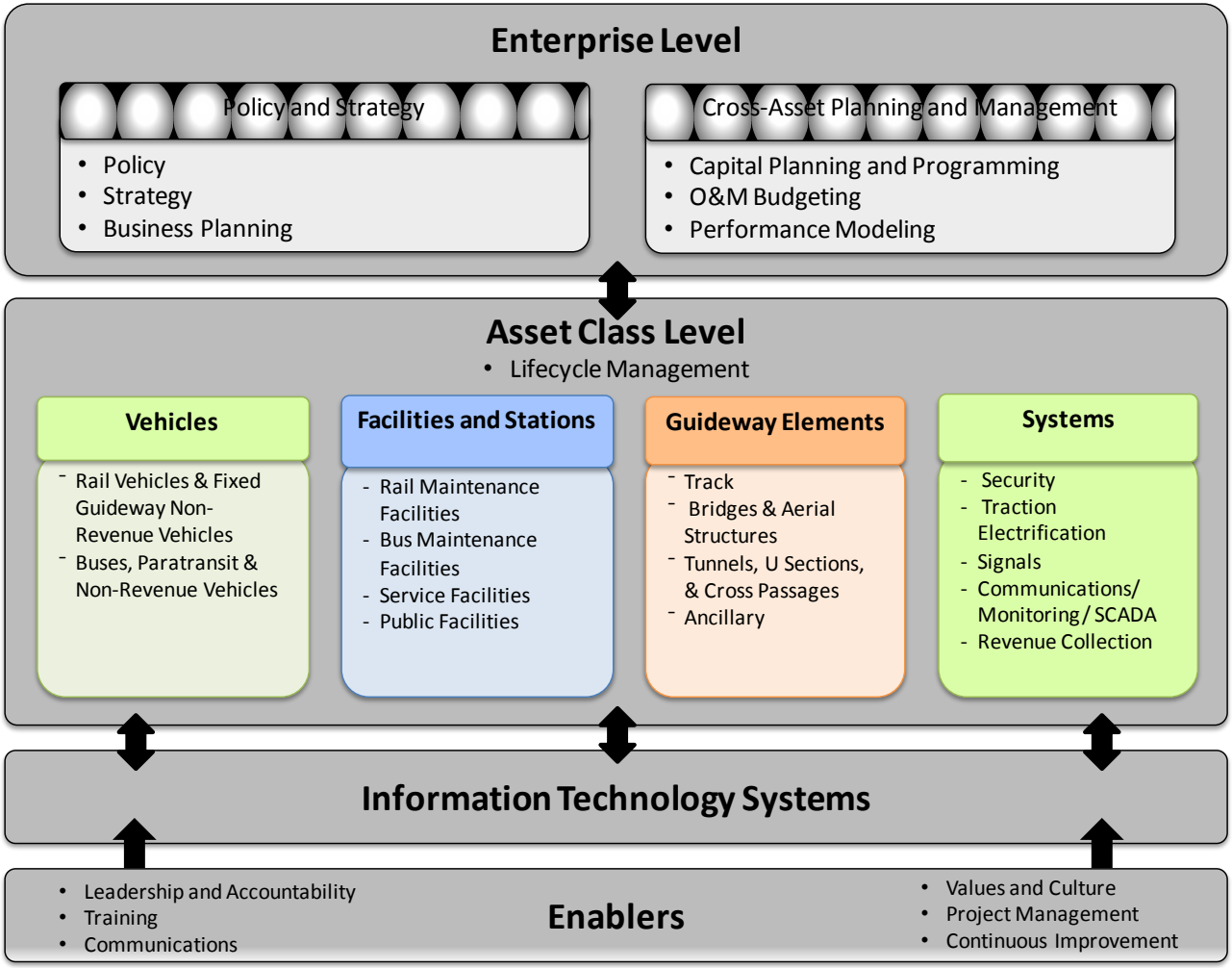


Transit Asset Management Agency Benefits

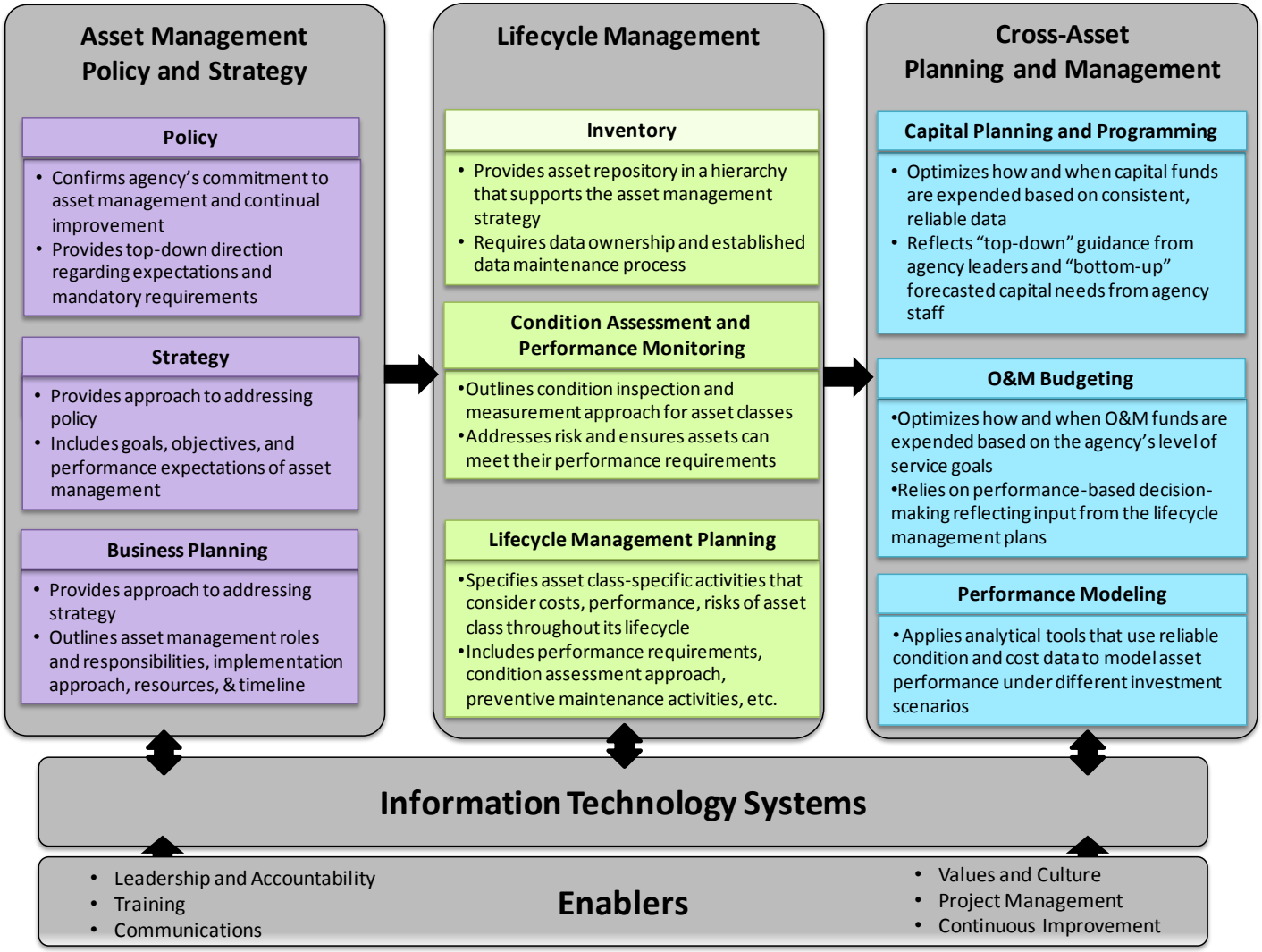
Transit Agency Business Benefits	Asset Management Approach
Improve customer service	• Improves on-time performance and service operations, vehicle and facility cleanliness; reduces missed trips, slow orders, and station shutdowns • Focuses investments around customer-driven goals and metrics
Improve productivity and reduce costs	• Maintains assets more effectively, using condition-based approaches and using predictive and preventive maintenance strategies (where these can be employed) to reduce costs while improving service delivery
Optimized resource allocation	• Better aligns spending with the agency's goals and objectives to obtain the greatest return from limited funds • Incorporates lifecycle cost, risk, and performance trade-offs into capital programming and operations & maintenance budgeting
Improved stakeholder communications	• Provides stakeholders with more accurate and timely customer-driven performance indicators • Provides tools to communicate forecasted performance metrics (including level of service) based on different levels of funding

Transit Asset Management Framework Overview

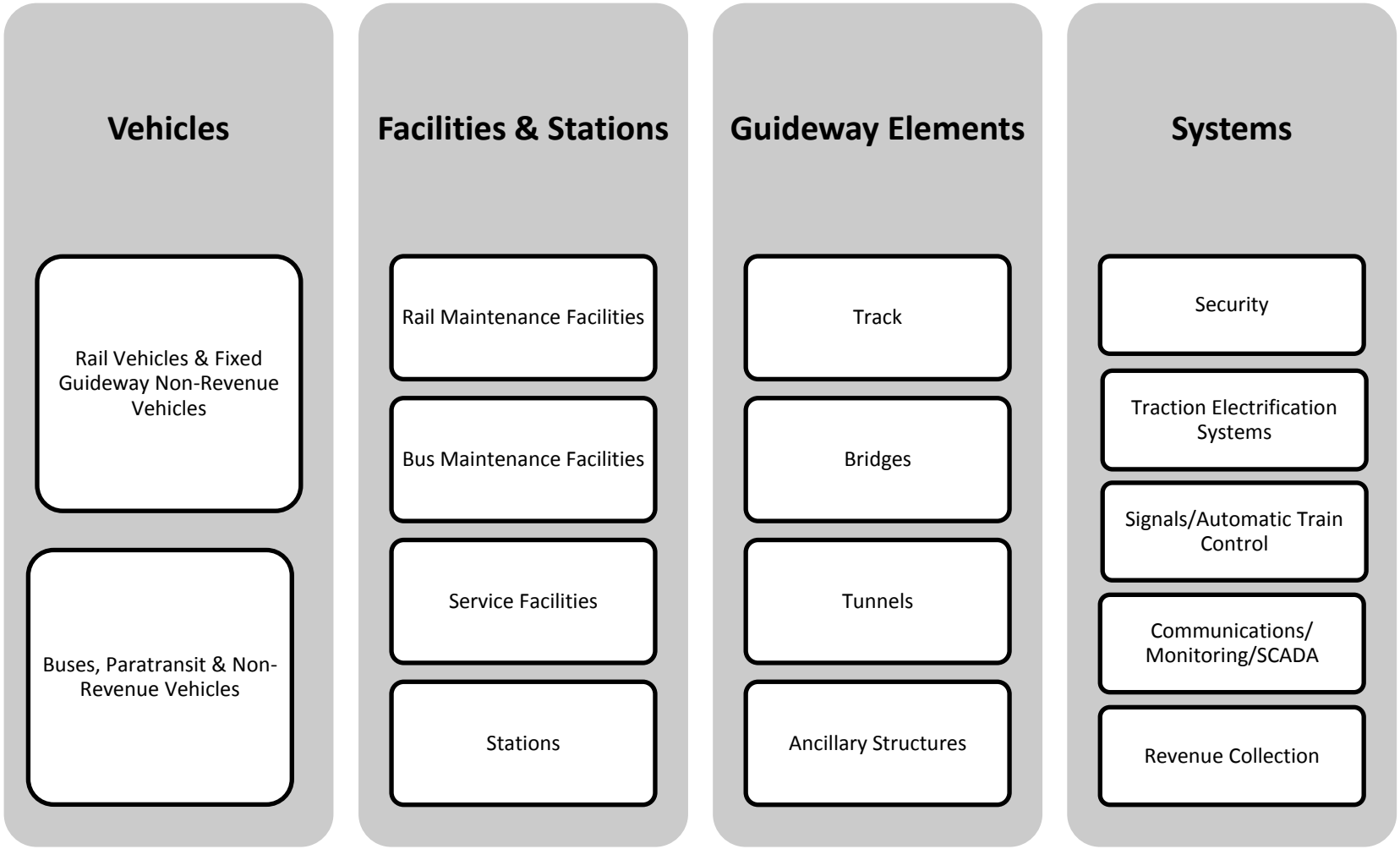
Draft Transit Asset Management Framework



Asset Management Framework Business Processes



Asset Class Hierarchy



Asset Class Example: Maintenance Facilities

- **Definition**: refers to the structures used for maintaining all revenue vehicles
- **Lifecycle Management Considerations:**
  - Design: Consider on-site circulation of work processes when designing facility to make work flow more efficient and reduce accidents
  - Preventative Maintenance: When possible, utilize a maintenance management system for tracking facility maintenance requirements and proper intervals
  - Capital Rehabilitation/Replacement: Replace all lighting and plumbing fixtures in building (likely at one time)
  - Disposal: Consider re-sale opportunities of equipment
- **Condition Assessment and Performance Monitoring:**
  - Monitor lumen output every 2 years to check for lighting levels
  - Monitor air changes per hour on a continuous basis

Asset Class Example: Maintenance Facilities (cont.)

- Sustainability Considerations

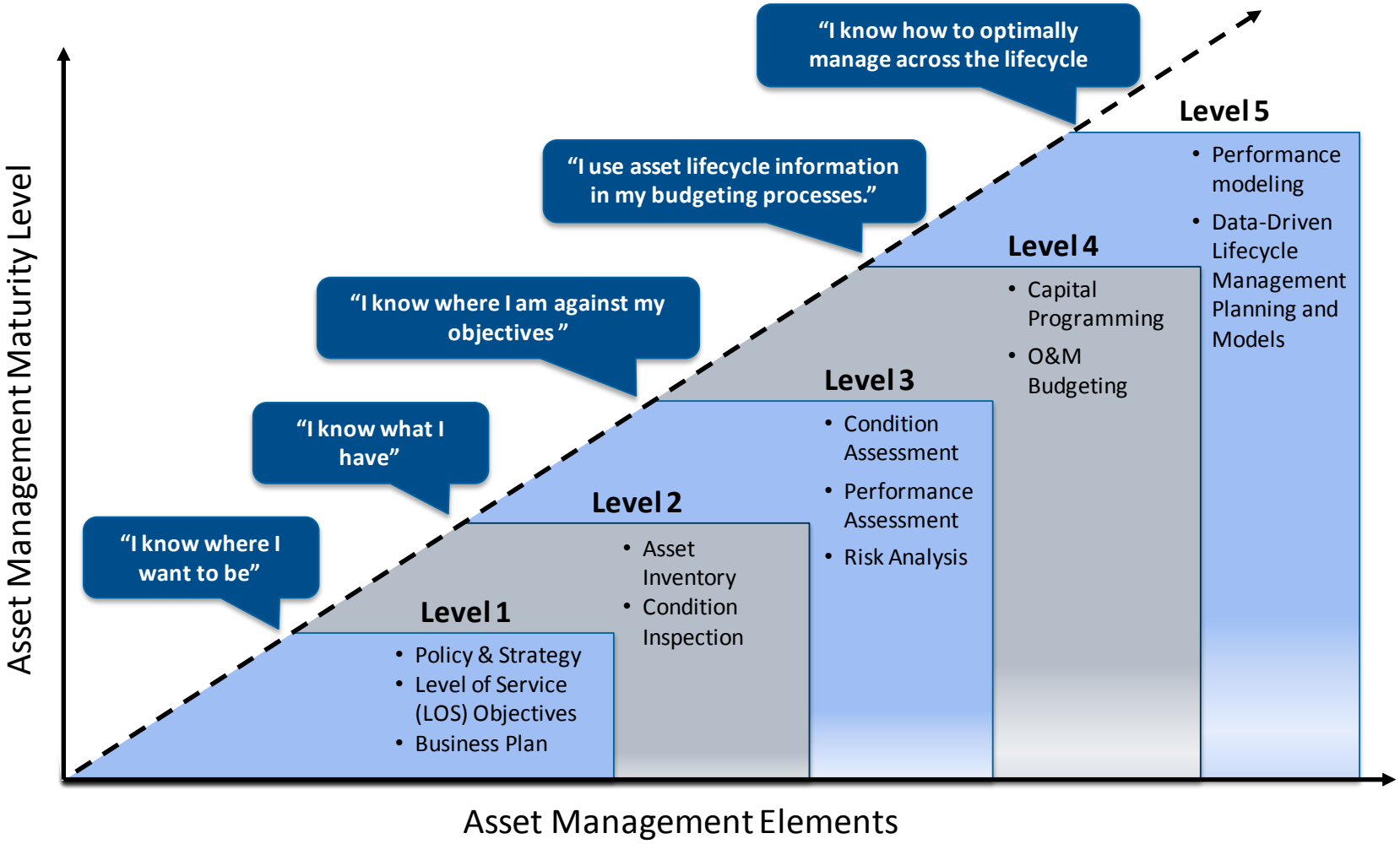
Sustainability Considerations	Benefits	Explanation
Renewable Energy	Cost savings, GHG	Renewable energy options with utility provider, independent power provider with proposed energy source (e.g., wind farm, concentrated solar, photovoltaic)
Healthy materials	Customer and employee healthy	No volatile organic compounds (VOC), formaldehydes, or other toxic materials

- Performance Metrics

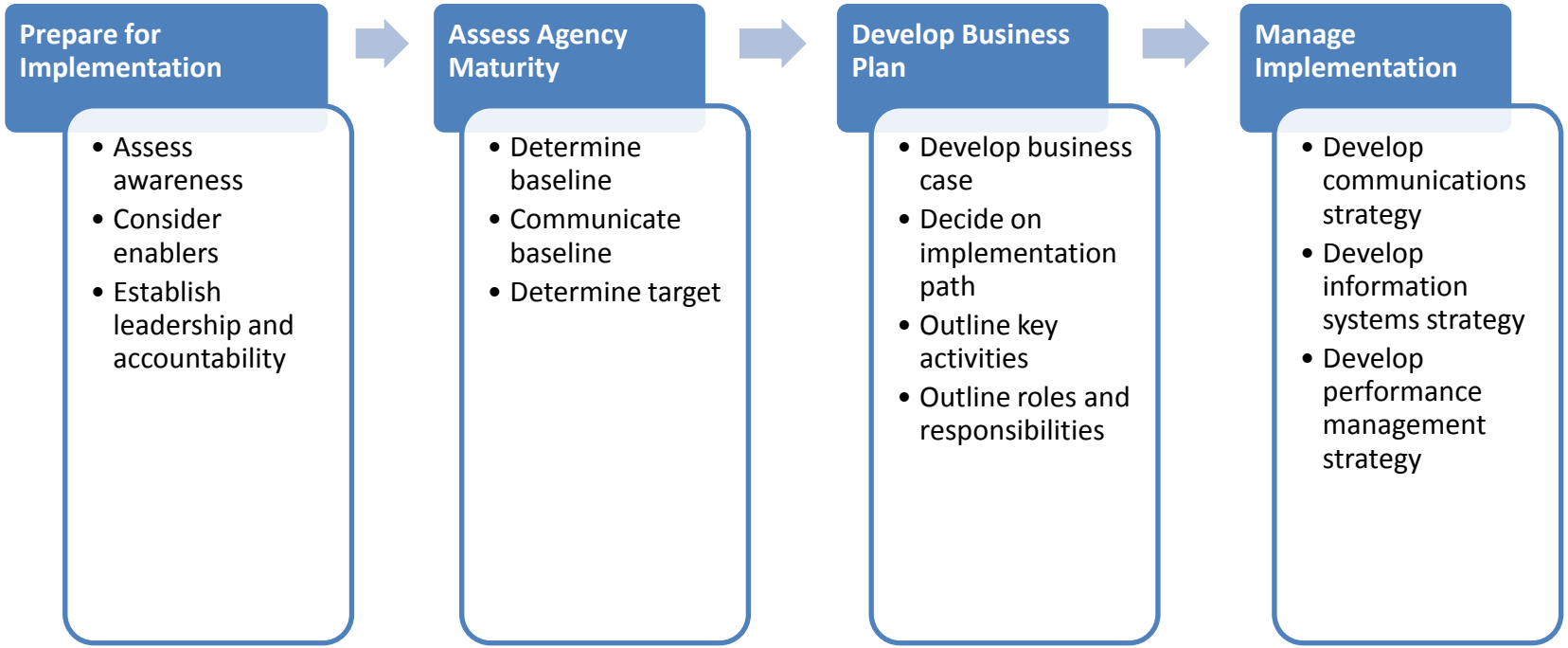
Asset Class	Condition/Structural Assessment Metrics	Performance Metrics
Bus and Rail Facilities	• Energy efficiency, which can be measured by the billing costs of electricity, water, gas, and garbage. • Effective facility management may be measured by the costs of maintenance and replacement of assets.	• Availability • Safety (days without incident, # of workers comp claims) • Compliance with preventive facility maintenance program • Employee satisfaction • On-time performance (indirectly)

Transit Asset Management Implementation

Asset Management Maturity



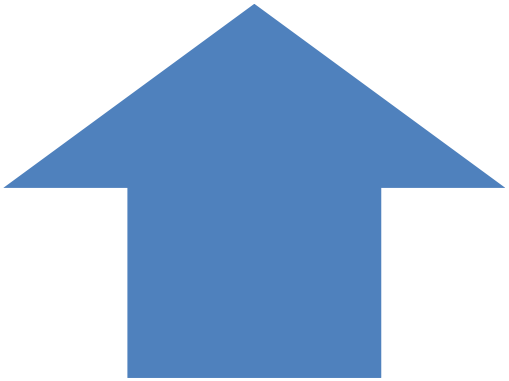
Implementation Activities



Organization/Leadership Concept

Top-Down Approach:
Leadership provides strategic direction, sets expectations, empowers managers, and allocates resources

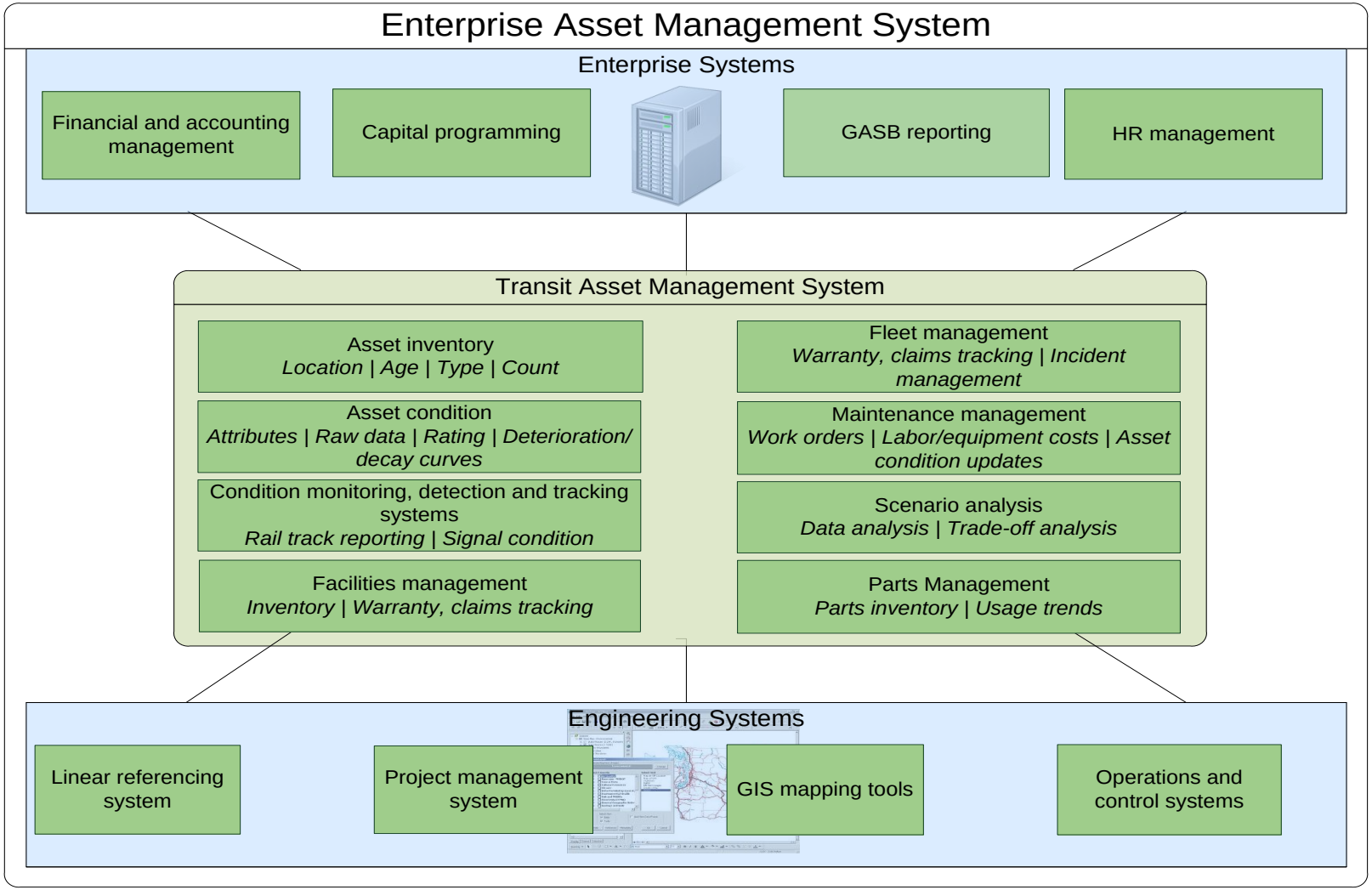
Bottom-Up Approach:
Middle management and staff implement and improve upon the asset management initiative



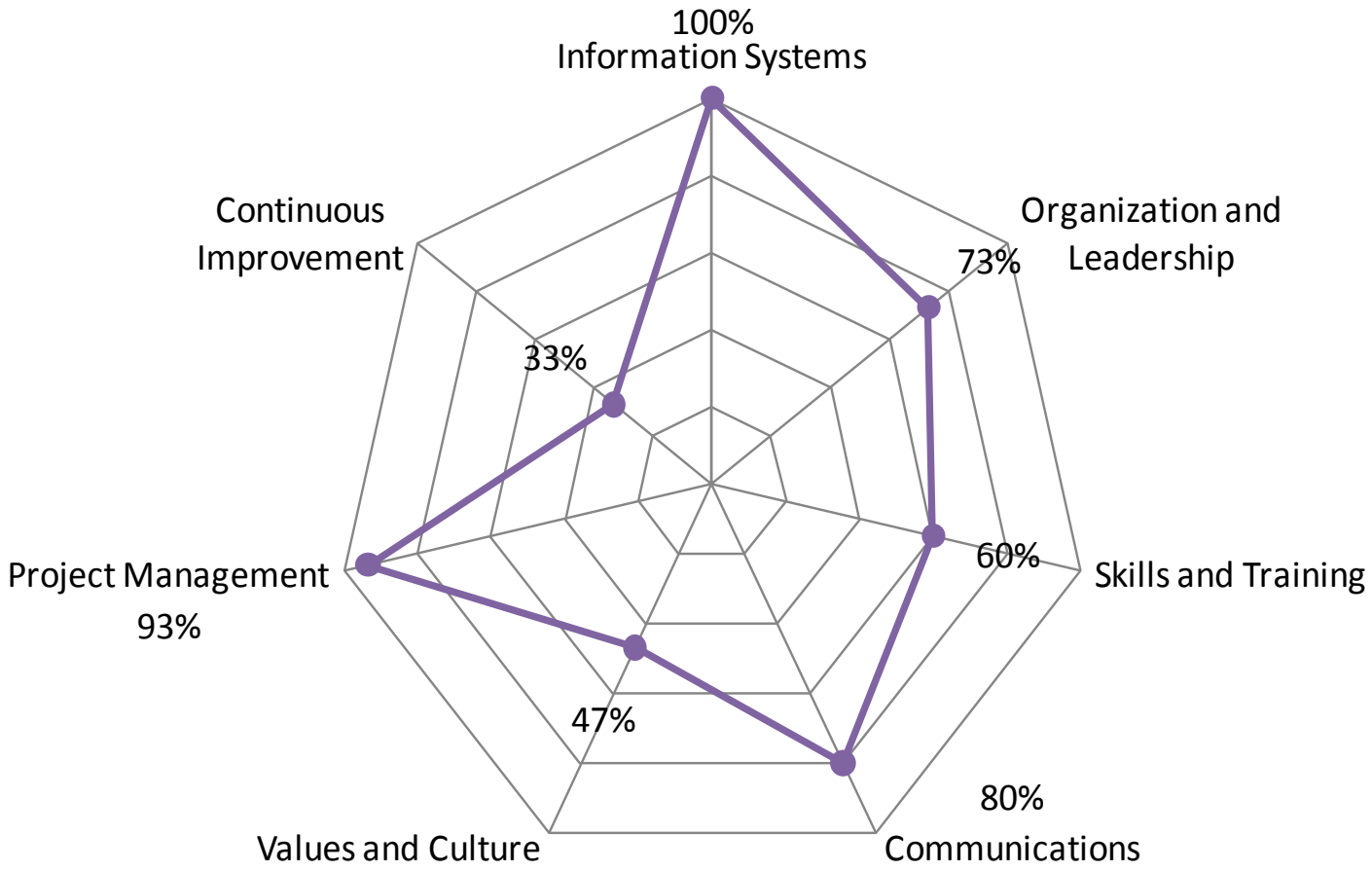
Key Asset Management Roles

Roles	Responsibilities
Board Members	Approves the asset management policies, strategy, and business plan Provides overall accountability
GM/C.E.O.	Establishes the goals, policies, and level of service requirements for the organization Dedicates appropriate resources Provides leadership needed to drive change Enforces strong accountability measures
Program Manager	Leads development and implementation of AM Business Plan Leads AM Steering Committee Communicates to internal and external stakeholders
Steering Committee	Responsible for developing and sharing AM best practices throughout organization
Asset Owners	Leads development and implementation of asset-specific lifecycle management plans
Department Heads	Ensures all line staff understand how their job supports AM strategy
Line Staff	As the key asset management business plan implementers, these individuals should conduct day-to-day responsibilities with an understanding of how they support the AM strategy

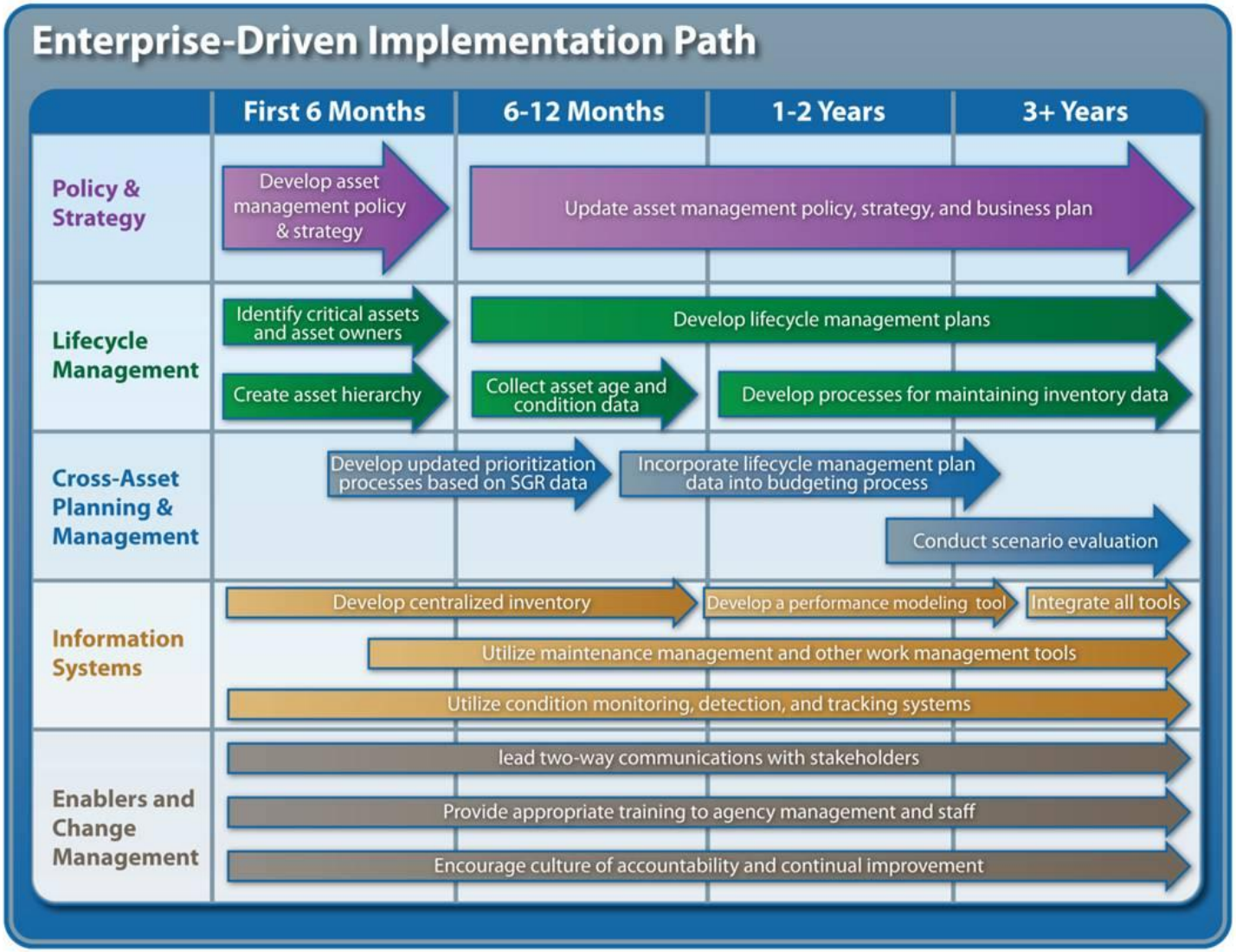
Asset Management and Information Technology



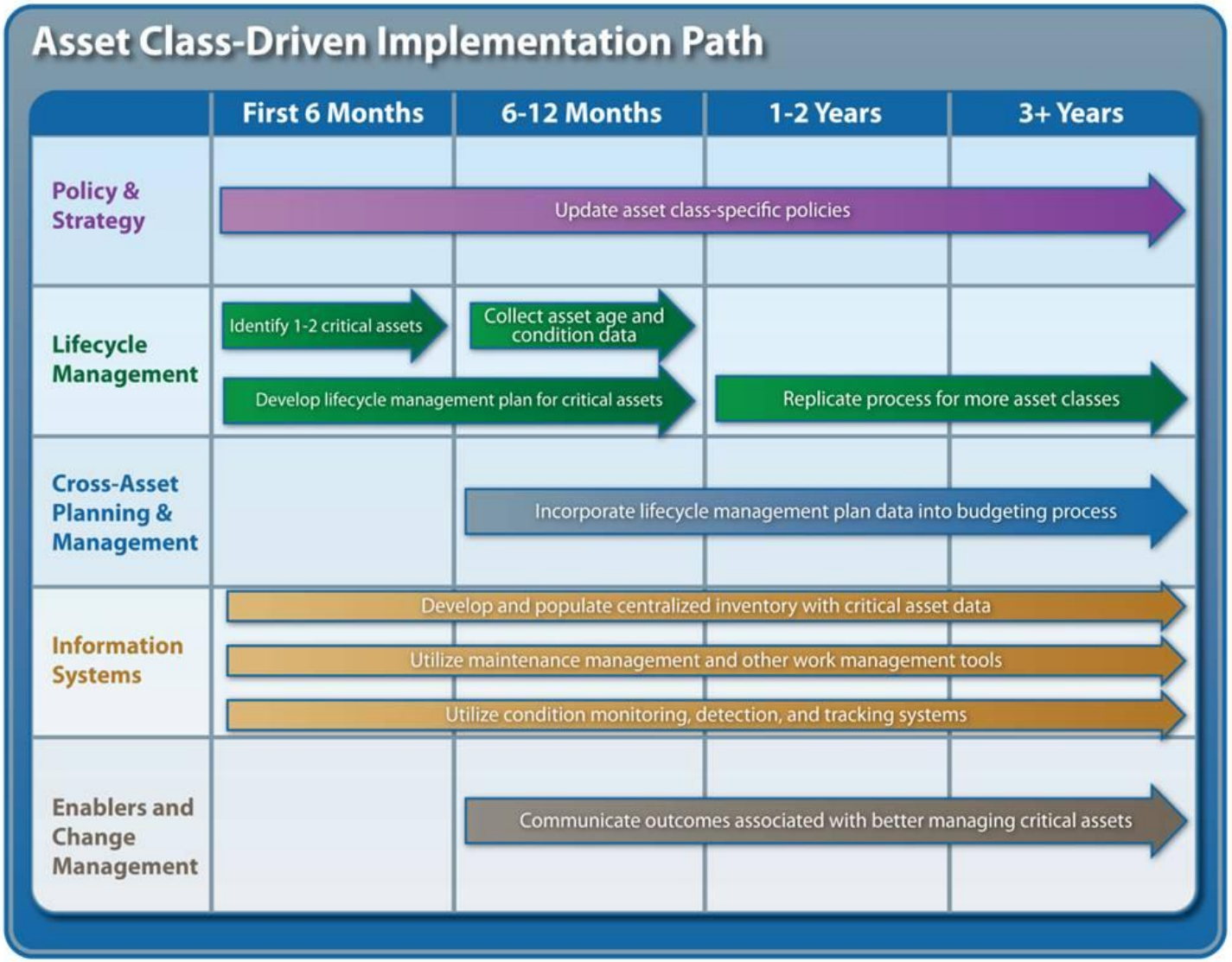
Transit Asset Management Maturity Agency Self-Assessment Sample Output



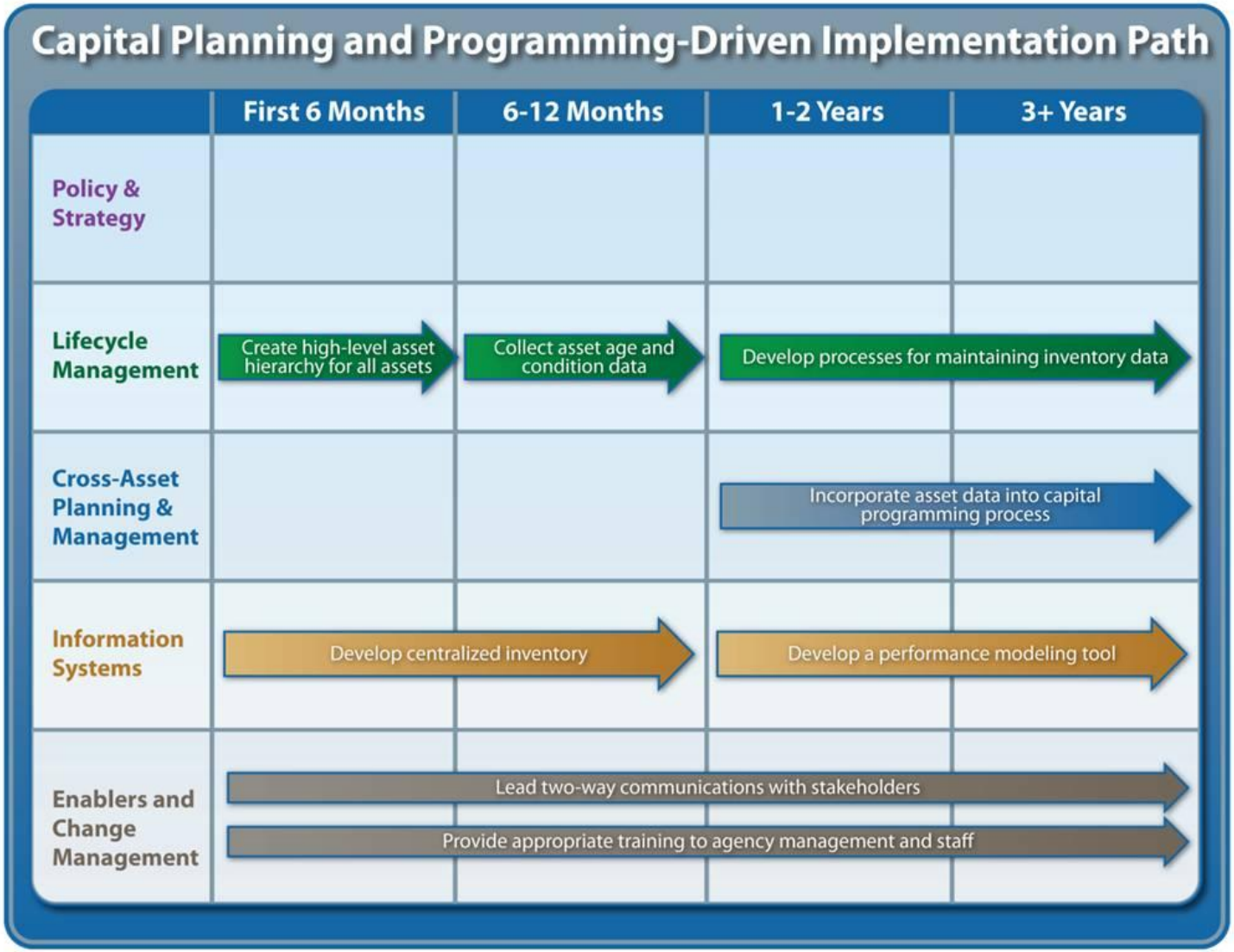
Implementation Path #1: Enterprise-Driven



Implementation Path #2: Asset Class-Driven



Implementation Path #3: Capital-Driven



Next Steps

Status and Next Steps

- Chapters 1 through 4 and Chapter 6 in draft final and ready to publish
- Chapter 5 – asset class specific undergoing further technical input will be complete and ready for review this month
- Prepare for training and roll out

Questions? Comments?

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